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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,020	12/21/2001	Gin Liu	213202.00355	3692
27160	7590	02/07/2006	EXAMINER	
KATTEN MUCHIN ROSENMAN LLP 525 WEST MONROE STREET CHICAGO, IL 60661-3693			GHULAMALI, QUTBUDDIN	
		ART UNIT	PAPER NUMBER	
			2637	

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/024,020	LIU ET AL.
	Examiner	Art Unit
	Qutub Ghulamali	2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 11/16/2005.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-7, 10-16 and 31-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-7, 10-16 and 31-37 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date: _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date: _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

## **DETAILED ACTION**

1. This Office Action is responsive to the Amendment/Remarks filed by the applicant on 11/16/2005.
2. The office acknowledges applicant's amendment of the Abstract of the Disclosure. The abstract is considered acceptable.

### *Response to Amendment/Remarks*

3. Applicant's amendments/remarks, filed 11/16/2005, with reference to rejection of claims 1-7, 10-16 and 31-37, have been fully considered but they are not persuasive.

The claim rejection and response follow.

4. Applicant's remarks - The applicant alleges, see pages 7-9, that Levin (reference 6,130,882) does not disclose the determination of channel frequency response on a per bin basis and the receiving data dependence upon the retrieved measurements as claimed (reference claims 1, 10 and 31(new)). The Applicant has amended claims 2, 4, 11 and 13, rendering the arguments moot. The rejection based on the amended claims 2, 4, 11 and 13 to follow elsewhere in this office action.

The examiner's response – With reference to applicant's remarks regarding channel frequency response determination and initialization, the examiner respectfully would like to draw applicant's attention to Levin, col. 1, lines 37- 57 and col. 2, lines 1-8, 51-61; col. 3, lines 50-65; col. 4, lines 1-35, disclosing the features such as noise and signal to noise ration determination and storage inherent as part of the ADSL communications including disclosure regarding

calculations and exchange of application specific parameters (bit rate, noise and signal to noise ration) between the central office (first end) and the remote unit (second end). Based on information disclosed in Levin, the examiner concludes that the claimed limitations are satisfied.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-7, 10-16, 31-33-37 are rejected under 35 U.S.C. 102(e) as being anticipated by Levin (USP 6,130,882).

Regarding claims 1, 31, Levin discloses a method of retrieving channel characteristics for a discrete multi-tone communication channel comprising:  
determining and storing on a per bin basis channel frequency response and noise measurements at a first end (Central Office (CO)) of the channel at initialization (abstract; col. 1, lines 37-42; col. 3, lines 60-63);  
determining and storing a signal-to-noise measurement on a per bin basis at the first end (Central Office (CO)) at show time (col. 4, lines 1-9; col. 8, lines 10-25);  
retrieving the stored (look-up table) channel frequency response, noise and signal-to-noise measurements at a second end of the channel (CPE) (col. 8, lines 10-15); and

receiving data at the second (CPE) end at a rate in dependence upon the retrieved measurements (col. 2, lines 50-61, 66-67; col. 3, lines 1-4).

Regarding claims 2, 11 and 32, Levin discloses first end comprises a central office (CO) end, and the second end comprises a premise equipment (CPE) end (fig. 1; col. 3, lines 50-60).

As per claims 3, 6, 12, 15, 33 and 36, Levin discloses the channel is asymmetrical as in ADSL (col. 3, lines 51-51).

As per claims 4, 13 and 34, these claims are analyzed in a similar fashion as claims 2, 11 and 32 as Levin discloses transmitter to receiver and receiver to transmitter functions in a transceiver embodiment.

Regarding claims 5, 14 and 35, Levin discloses the channel is non-overlapping (see col. 4, lines 15-31).

As per claims 7, 16 and 37, the claims are design related and the xDSL technology can be adapted to a very high bit-rate DSL channel in Levin.

As per claim 10, the steps claimed as circuit (apparatus) is nothing more than restating the function of the specific components of the apparatus as claimed and therefore, it would have been obvious, considering the aforementioned rejection for the method claim 1 above.

### *Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patents:

Rudnick (US Pub. 2002/0131371) discloses a method to dynamically change all MIB parameters of a wireless data network.

Gerszberg et al (USP 6,044,403) discloses a network server and video application server.

O'Toole et al (US: 6,373,860) shows a dynamically assigned voice and data channels in DSL.

Amrany et al (US 6,192,109) discloses apparatus and method for improved DSL communication.

**8. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

**9.** Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutub Ghulamali whose telephone number is (571) 272-3014. The examiner can normally be reached on Monday-Friday from 7:00AM - 4:30PM 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

QG.  
January 26, 2006.

*Jean B. Corrielus*  
**JEAN B. CORRIELUS**  
**PRIMARY EXAMINER**  
2-3-06